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Integration can be fun

Integration continues apace in the computer industry. Dell is moving into the market for LCD displays and MP3 players, Hewlett-Packard has made a move up into the office equipment market for photocopiers and full-blown document production systems – and networking equipment maker Netgear is working hard to make an innovative splash in the living room with its WGT634U Super Wireless Media Router.

The good news for Performance PC readers is that all this integration means that we will no longer have to work so hard to do this kind of thing ourselves. Making PCs that are optimized for gaming, video and generally high-performance entertainment has become the concern of mainstream chip-makers, PC manufacturers and video-card producers.

It doesn't, of course, mean that there won't be anything to add or upgrade on the PCs of the future – it just means that you may choose to upgrade different pieces of the PC (and can be sure that a lot of the basic high performance components of the system have been optimized to work together). The PC, for example, may yet become a popular device for watching TV.

One indication of this was AMD's recent announcement of support for Microsoft's Windows XP Media Center Edition 2004 on its AMD Athlon 64 processors. The company said that both desktop and mobile systems are based on AMD64 technology, which it claims will enable "immersive" audio and video features for what AMD calls "immense computing".

AMD says with Athlon processor-based PCs with Windows XP Media Center Edition 2004, consumers will be able to view live television, personal video recording, music, photos, videos, radio and DVDs from the Media Center PC using a simple remote control. The company says that

customers will be able to shift television schedules, customize a music library, or select from multiple entertainment sources from the familiar simplicity of the Windows operating system.

Arch-rival Intel, meanwhile, has an initiative called PCs for the Digital Home and uses a "digital media adapter" that acts as a wireless bridge between a PC and the TV or stereo. It uses standard audio/video cables to connect to TVs and stereos, and wireless networking to communicate with the PC. Intel says that in this scenario, the "PC does all the hard work of processing and distributing the digital media throughout the home – the adapter simply passes it along to the TV and stereo". Intel says that this setup allows the adapter to remain low cost, while providing consumers with a high-quality experience.

Intel's plans for the digital media adapter are that will be installed similar to other "consumer-friendly" devices such as digital cameras and printers. For adapters that are packaged with a preconfigured PC, users will simply launch the preloaded software from a desktop icon to configure the device, then—similar to a DVD player—connect the adapter to the TV and stereo. ☐



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Midrange Gaming System

By Babak Khoshdel

Target

This system is geared more towards the midrange gaming rather than the business/workstation market. The ATI Radeon 9600 Pro was my main focus in this review. It is not the newest video card on the market, but still offers great gaming performance with a "budget" price tag for the average gamer. The retail ATI 9600 PRO does not come with a solid bundle, but it does come with the reputation of being "built by ATI" and that does mean you'll get certain quality from your purchase. I used the Star Trek: Elite Force 2, for my benchmarking software. The graphics quality was set to maximum, and I ran the test three times each in default mode. I didn't adjust the texture quality because the performance gain is too small and a few fps aren't worth the quality loss.

Background Techno babble

Intel launched the Pentium 4 3.0C back in April. With faster 900 MHz system bus, capable of providing up to 6.4 GB/sec of peak memory bandwidth to the processor. The downside of this chip was the price. To accommodate the needs of the mainstream market, Intel introduced the Pentium 4 2.4C, Pentium 4 2.6C and the Pentium 4 2.8C. Price of these chips were less than half the original 3.0C chip, while the main 800MHz bus support feature was kept. The second issue was the motherboard price. Intel introduced the 865 platform, which is composed of three chipsets: 865PE, 865G, and 865P. These chipsets offer full support of the 800MHz bus and the dual channel DDR-400 memory. Dual-channel DDR memory technology outperforms any existing solutions in the market by doubling the bandwidth of your system memory, offering a peak bandwidth of up to 6.4 GB/s.

The ASUS P4P800 motherboard, along with the Intel P4 2.6C, that I am reviewing, is based on the 865PE chipset. To make things even more attractive, ASUS P4P800 is an ATI Radeon-based motherboard with standard 8X AGP. The 8X AGP enables enhanced graphics performance with high bandwidth speeds up to 11.2 GB/s. The motherboard also comes with on board 3COM 10/100/1000 LAN and Audio, 5 PCI slots, 2 DDR-400 memory slots and 4 USB ports in the back and two in the front, one 9 pin serial and one parallel port. There is also a S/PDIF out port, for easy connectivity between your motherboard and Home Theater system. Another feature that is a definite plus is the built in SoundMAX Digital Audio System. This system can output 5.1 channel surround sound and supports all major game audio technologies including Microsoft DirectX 8.0, Microsoft DirectSound 3D, A3D, and EAX.

SYSTEM SETUP

CPU:	Intel® P4 2.6C 900 MHz
Motherboard:	ASUS P4P800
Memory:	2x512MB PC2700 DDR-400
Hard Drive:	30GB IDE, 80GB SATA & DVD
Video Card:	ATI Radeon 9600 PRO 128MB 1.6ns
Optical Drive:	DVD-R/RW Combo
Case:	300W ATX PSU, case with 820W PS and Windows
Approx. Retail Price:	\$1,800 USD
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The final ingredient that makes this system what it is, is the Radeon 9600 Pro. 9600 Pro is a 4 pipeline, 1 TMU and Shader unit per pipeline, architecture, with a 400 MHz clocking speed. What this basically means is almost no stress on the CPU, and more performance from the card. ATI provides a standard VGA, DVI and S-Video out, and with the DVI-to-VGA adapter, you can have dual monitor support.

Conclusions

This is what the midrange is all about. The 9600 Pro finds a nice balance between performance and pricing, along with the driver support that's no longer lacking. The system as a whole is not too expensive and perfect for the midrange market. I was happy with the overall image quality and gaming performance the 9600 Pro delivered. What I would have personally preferred, is if ATI had included a video capture input on the 9600 Pro, because once in a while I like to dabble in video editing. If you are considering building a solid system on a decent budget, I definitely recommend this system. However, the die-hard gamers would feel limited with the 9600 Pro, and would probably outgrow it very fast. ■

Pro's

- Nice performance
- Image & Sound
- Almost invisible thermal output
- Excellent 2D solid state

Con's

- No video capture support for 9600 Pro

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Text Formatting and CSS

By Keith Schenck-Roberts

Like HTML, the development of official standards for Cascading Style Sheets is an ever-evolving process. The World Wide Web Consortium ("W3") actively seeks expert input on this process from the many member companies and groups comprising its membership. Not insignificantly, many of the CSS additions made to the most recent editions of Internet Explorer contain elements which were later proposed to the W3, and have since been adopted in some form within the latest drafts of the CSS3 specification, still yet to be officially endorsed. So there are a number of features in the impending CSS3 specification you can put to working knowledge of by playing with their precursors in Internet Explorer 6. The following may or may not be the way things are finally decided upon in terms of the official W3-endorsed specification, but you can play with these foreign-text formatting CSS elements in Microsoft's latest browser for Windows.

Spacing for Arab Text

Arabic text is typically justified upon a line by expanding individual characters at certain, pre-determined points. This type of justification on Arabic text is called *kashida*. The text-kashida-space property that currently exists within Internet Explorer 6.0 provides fine control over this type of justification, setting the ratio of kashida to white-space expansion.

The text-indent:space has two properties, a percentage value and inherit. The inherit value takes on whatever parent value may already be set. This property is a definite case demonstrating how successful Microsoft has been in pitching its ideas for CSS properties to the World Wide Web Consortium – the text-indent:space property in the CSS3 text module works in exactly the same way as it currently functions within Internet Explorer.

The effects of text-kashida-spice are subtle but definite. The effect is not so much to justify the line of characters across a line, but instead to stretch the very characters themselves in order to fill in a line. It is meant to be used in conjunction with text-align: justify and text-justify: kashida, and the following sample code shows how they all work together to produce an effect.

```
<html dir="nl" lang="ar">
<head>
<title>text kashada space Example</title>
<meta http-equiv="Content-Type" content="text/html,
charset=windows-1256">
<style>
p{kern: (font-size: 25pt, width: 550px, font-family:
"Traditional Arabic", font-weight: bold, text-align: justify;
text-justify: kashada)
</style>
```

«heads»
«choice»

The following are the first few lines of the Koran in classical "Koran" style (not Arabic style, since 08-11-01):

[illegible]

The same text, but now with a setting of `<code>text-align: 10%</code>`

```
<p class="normal" style="text-indent: 100px">
  000000 0000 00000000 00000000
  00000000 0000 0000 0000000000
  0000000000 00000000 00000000
  0000000000 00000000
  000000 0000 000000
  00000000 000000 00000000 00000000
  00000000 0000000000 00000000
  00000000 00000000 00000000
  00000000 0000 00000000 00000000 000000
  0000000000
</p>
```



The text as displayed above may not make a lot of sense – it is a non-Unicode rendering for Arabic text. If you have some other samples of Arabic text handy in either Unicode or specific to a given Arab font on your machine, substitute it with the text in between the code in the above sample code to see the intended spacing effect for each Arabic word.

When displayed in Internet Explorer, you will readily see the difference between the initial text rendered using the default value and with a text-baskin-space value set to 10%. While the effect can be seen throughout the whole of second paragraph of text, in this case the effect is perhaps most clearly seen on the first line: the individual words are expanded and the space between them decreased.

Autoreading Asian Text

If you have done much work on creating Web pages destined for an Asian-language audience, you know that there

Continue on page 12



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Stopping Email Threats the Post-Office Way

Email threats—such as viruses, worms and denial-of-service attacks—have become one of the most significant dangers to businesses today. Clogging corporate networks, linking servers, disrupting email traffic and bringing missions—critical business operations to a screeching halt, these attacks are now propagating faster than ever.

Fighting email threats has become a day-in and day-out battle—and one of the best ways to wage that war is by using the “post-office” model.

Today, your post office stops suspicious or dangerous mail—such as mail that smells funny, looks flimsy, or emits a smelly ticking noise—before delivering it to your home or corporate mailbox. Post-office security measures like these ensure you’re protected. And that gives you peace of mind.

Without sophisticated security systems—similar to those the post office provides for your mail—your home or business email infrastructure is wide open to attack. Each and every message is routed from the sender to your email inbox, with no security filters, leaving you unprotected.

One of the reasons why your email is so vulnerable has to do with the Internet technology that makes it possible. Email messages are sent by the Simple Mail Transfer Protocol (SMTP). Created more than 20 years ago, this protocol was not designed for today’s mission-critical email

communications and was never intended to make messaging secure. SMTP is an “open-recipient” protocol, meaning that recipients have no choice but to accept email messages that are sent to them.

Most hackers and junk-mail vendors prey on open and accessible SMTP gateways—and most companies have open gateways because they publish their mail exchange (MX) record routes. Like your primary postal address, your MX record tells the Internet where to send all of your email, because it includes your primary IP addresses and backup or failover servers. Hackers leverage this information to not only understand IP address ranges and server locations, but also to connect directly to enterprise email servers.

Fortunately, businesses like yours can take advantage of email “postal” systems, which access the Internet on your behalf. These managed email service providers conceal your Internet-facing mail servers and gateways, shielding you from attack.

If you leverage a premier managed service such as MX Logic, you merely point your company’s MX record to that of the managed service provider’s. Your email address remains the same, but this simple change of the MX record routes all mail intended for your organization through powerful filters first—before sending safe mail on to your true inbox.

Just as the postal system has a department dedicated to tracking and detecting those who commit mail fraud and who send dangerous packages, advanced email protection services are dedicated to fighting ongoing email threats. By using a managed service as your “email post office,” you can take advantage of email experts whose sole job is to protect you from email threats 24 hours a day, seven days a week, 365 days a year.

There’s one thing that managed protection services will do for you that your post office will not, however. As everyone knows, postal services deliver junk mail every day. In fact, they make a lot of money from junk mail and protecting you from receiving it would be bad for their business.

But leading managed protection services stop the deluge of junk email (spam) while they protect you from email threats. Many of these services use multiple spam-filtering techniques that can block more than 95 percent of spam, while maintaining minimal false positives (legitimate email marked as spam). In this way, managed email protection services are far superior to post offices.

By leveraging one of the premier managed services available today, you will safeguard your network, increase employee productivity, decrease network and storage costs, and reduce corporate liability.

The “email post office” will also give you peace of mind in knowing that you’re utilizing the safest, most effective way to guard your email—and your business. ■

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The Stocking Is Half Full: A post-Christmas Guide to Buying What You Didn't Get Under the Tree



By Geoff Whithright

So Santa didn't fit your most-wanted technological goodies on his sleigh at Christmas – and you were given gift certificates or cash instead. Well, that's still not too shabby. You now have the chance to do a little post-Christmas shopping to give yourself what you didn't get for Christmas.

To help you in this undeniably gleason task, I offer the following summary of recently-released goodies that you should consider putting in that empty spot where the Christmas tree used to be.

Dell Inspiron 300m notebook computer

I can vouch for this one – it's a keeper. I have been using this lightweight notebook (when using the lightweight battery on it, it comes in at less than three pounds) for three months now and it is truly fantastic. I used it in conjunction with the base station and long-life battery – and can

get up to four and a half hours out of it when I'm traveling – meaning that when I'm traveling, I can watch a full-length DVD movie and still have a couple of hours left on it to get some work done.

It comes with 256 Mb of memory, provides all the important I/O ports even when used without the base station (ie: USB, modem, Ethernet, power, audio ports and video output), includes built-in WiFi and the Intel Centrino chip set. The display is bright and works well at a variety of angles – and, with a capacity of 30 Gb, the hard disk is probably as big as you need (especially if you make judicious use of the DVD/CDR drive that comes in

the base station).

The keyboard is big enough to be used in almost all conditions, but not so big that it prevents you from working in a cramped airline seat. If you need a lightweight notebook that doesn't compromise on performance or capability, you could do far worse than the 300m.

Dell Axim X3

It's been a bit of a Dell Christmas at our house and the \$529 X3 came into my hands a few weeks before the festive season. Like its larger companion, it has also been a delight to use, offering a whole lot of power in a small size. It comes with a 400 MHz Intel XScale processor, built-in WiFi (although there is an entry-level model that doesn't come with WiFi), 64 Mb of memory and a color screen that is very easy to work with.

At 5 inches, the Axim X3 is 28



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WINNER



The staff of PerformancePC and NCIX are proud to hand over the Gamer XP 100 System to our last contest winner, Thomas Tien, on December 22, 2003 on the NCIX.com.ca Website.

Thomas was excited and delighted to learn that he was the lucky winner in the ncixPC Gamer XP 100 contest. The timing was just perfect as the prize came in a joyful delight in the last forty-eight hours before the Christmas season. "I promised my son to buy him a new computer in April. I was so stressed and couldn't believe this is true. I actually won. Now my son doesn't have to wait till April because this will be his surprise Christmas present. I am so happy!" said Thomas to one of the staff.



Publisher's Pick

TOP TEN BOOK LIST



ISBN: 0130610404
Title: Office 2003 Inside Out

Author: Michael Holsman
Publisher: Addison-Wesley

Adobe Premiere Pro



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ISBN: 0321180784

Title: Premiere Pro: The Complete Guide

Author: Adobe Creative Team

Publisher: Adobe Press



ISBN: 0672224480

Title: Mac OS X System Administrator's Guide

Author: Peter Dinkley and Rosalinda Zink

Publisher: Addison-Wesley

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- 10 0788726384 Digital Camera and Imaging Guide

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| Gary Perry | Series |
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by Geoff Whelanwright

Changing The World



The following is taken from an upcoming book by PerformancePC Executive Editor Geoff Whelanwright - called Inside the Bubble - about his experiences in the "dot com" industry between 1999 and 2001. Chapter One was featured in the October issue of Computer Pro, and is still available online at: http://www.computerprocanada.com/ect_insidethebubble.htm

Chapter Four - Changing The World

From the first time that Charles and I had talked about the possibilities for Investment.com it seemed that we had the chance to do something amazing. We felt that the domain name was such a gift that one of our early experimental taglines for the site was "Investment.com - where else would you go?"

The answer to that question became starkly apparent about 18 months later, but in July of 1999 it seemed that we were ready to rock the world. We thought that consumers would flock to a single place on the Web where they could not only learn about every possible type of investment vehicle available to them - from stocks to bonds to mutual funds to insurance currency trading to real estate to collectibles - but they would also be willing to make such investments online through the Investment.com Web site.

And it wasn't as if we were alone in thinking that there was merit in this idea. From the start, we had interest from online banks, brokerage houses and a variety of financial professionals who seemed fascinated by the idea - and admittedly probably quite dazzled by the valuations that dot com companies were achieving.

The first week or so at Investment.com was a whirlwind of meetings and a flurry of ideas - and coming to terms with the scope of the massive job before us and working out how quickly we could create an investment-related Web site that would be worth visiting. The goal was to have a "soft launch" quickly and then follow that up with an "official" launch of Investment.com sometime in October.

We had tons of people to hire, the identity of the Web site and the company to define - and a lot of plans to put together. Coming from a newspaper and magazine background - and being in charge of content development - my first priority was to hire a small team of writers who could quickly help create a dynamic personal finance Web site that would be updated daily.

In addition to all of this, I quickly learned that a portion of my time would have to be devoted to educating investors about the merits of our plans for the Investment.com Web site. After all, Victory Ventures was a public company and I knew from my years of covering business stories that

disclosure was a big issue for investors. I did not yet understand, however, just how demanding the public nature of the company would be - especially as my role meant that I was officially an "officer" of the company and needed to register myself with the BC Securities Commission as a result of that role.

Keep in mind, as well, that many of the thousands of investors in this public company knew little or nothing about the company itself. When I came on-board, all they knew was that it was moving from being a rising penny stock to being a dot com penny stock. And given the level of hype around dot com companies at that time, this change alone was enough to put big smiles on their faces.

Within two weeks, I came face-to-face with investors at an "extraordinary general meeting" (or EGM) called to get shareholder approval for the company's change in direction, its new structure - and a change of name (to Global Investment.com Financial Inc.). I put together a PowerPoint presentation designed to walk investors through my plans for the Investment.com Web site - and delivered it to a room full of nods and smiles.

But as I think back to that meeting, I remember having the sense that many of the investors didn't really have a good idea of what our new business was - they only seemed to think that it was something that would make that lot of money. For those who had been in on the stock when it was languishing at a price of a few pennies, the change of business had already done that. Even then, the stock was sitting at 68 cents - meaning that some investors were already enjoying a 500 per cent improvement in the share price.

The other thing that became apparent to me during this time was just how much of a juggling act Investment.com was going to be for me personally. Like many technology start-ups, the monthly fee the company could pay me for my work was not enough to warrant taking it on as a full-time position. The idea was that the options would make up the difference - and that I could carry on my work as a freelance writer as time permitted.

A good example of how difficult that juggling act would be came during the hour leading up to the EGM with investors. I had an interview to do for a story that I was writing for the Financial Times, yet no time to sit down at a desk and do the interview prior to the EGM. So I compromised. I got in my car to drive to the EGM, called the interviewers on my cellphone, put it in speakerphone mode, switched on my tape recorder and conducted the entire interview as I drove. I transcribed it later and was able to keep juggling. But I just kept waiting for all the balls to come crashing down on my head. ▶

Component	Asus	HP	Microsoft	Sony
CPU	Intel P4 2.80Hz 800MHz/533	Intel Celeron 2.75GHz	Intel P4 2.80Hz 800MHz/533	Celeron 2.80GHz
Motherboard	Asus P4X800-ES	Asus P4X800-ES	Asus P4X800-ES	Asus P4X800-ES
RAM	512 PC-3200 AGESA DDR	512 PC-3200 AGESA DDR	512 PC-3200 AGESA DDR	512 PC-3200 AGESA DDR
I/O Ports	Power USB	No total	Power USB	Power USB
LAN	On board 10/100 Ethernet adapter	On board NIC 10/100BT	3Com 10/100BT Ethernet PD	On board 10/100
Video Card	ATI Radeon 8500 128MB	On board 33 video	ATI Radeon 8500 128MB	ATI Radeon 8500 128MB
Monitor	17" AGESA Flat	17" Acer AC71 CRT	NEC AS20 17" Flat	17" Samsung 1500F
Hard Drive	30GB ATA/133 7200rpm	Western Digital 30GB 7200rpm	30GB ATA/133 7200rpm	30GB ATA/133 7200rpm
Optical Drive	52x 48x 32 DVD	16 SX CD-Rom	52x 48x 32 DVD	16 SX CD-RW
Sound Card	On board External audio	On board AC97 3D Audio	On board AC97 sound	On board
Speakers	Speakers w/ subwoofer	200W Stereo speakers	MJ 500 200W Stereo (Amplified)	None (using TV)
Printer	N/A	N/A	Canon G50 Color Inkjet	Canon G5000
Scanner	N/A	N/A	Not included	HP 5570 Scanner
Case	18" Tower Case 300W PS	Not listed	17" ATX Tower w/ 300W power supply	17" Tower Case
Extras	1.44MB floppy	Firewire 1394 3.5 floppy drive	Firewire 1394 3.5 floppy drive	Side window / fan
Mouse	MS optical silent mouse	Agate optical mouse	Agate optical mouse	MS
Keyboard	MS multimedia keyboard	MS multimedia PS/2 keyboard	MS Windows 98 keyboard	MS internet keyboard
Software	Not included	Microsoft XP Home OEM	Not included - OS	Microsoft XP Home
Warranty	Not listed	Limited warranty	Not listed	1 year for 400 website
Price	\$248.00	\$203.99	\$268.00	\$268.00
Shipping	Not listed	\$10.00		Extra
PST	\$71.00	\$10.00	\$10.00	\$10.00
GST	\$36.36	\$10.34	\$10.34	\$10.34
URL	www.asus.com	www.hp.com	www.microsoft.com	www.sony.com
Phone	866-244-8763	866-213-1308	866-230-8863	866-230-8863

The Stacking is Half Full Continued from page 14

percent lighter than its predecessor and at 55 inches, 17 percent thinner. The Axim X3 also includes removable primary batteries, SD I/O, consumer infrared and is available in three configurations: one with integrated Wi-Fi 802.11b for \$529, and two non-wireless configurations for \$349 and \$469.

In terms of bundled software, the

Axim X3 handheld comes with Microsoft's Windows Mobile 2003 software for pocket PC, and pocket versions of Microsoft Outlook, Word and Excel, Internet Explorer, MSN Messenger and Windows Media Player. Probably the best feature of the machine, however, is the screen - a 3.5-inch transreflective TFT color display with 240x320 (QVGA) resolution. The unit's sync/ recharge cradle - standard on \$469 and \$529 configura-

tions - has an extra battery charge slot that accommodates either a standard spare battery (950 mAh) or the optional high-capacity (1800 mAh) battery for an additional cost of \$139.

Nokia N-Gage

We also had a chance to have a brief play with Nokia's new N-Gage "gaming platform" - sold in Canada at Electronics Boutique. The recommended retail price on it is \$449 and

WebLog	OS (p. 23)	BarWin	FrontierPC (p. 3)
Intel P4 2.4GHz 800MHz	Win 98 SE (95)	AMD Athlon XP 2500+ Barton	Intel Celeron 400MHz 1.0V DVP-30
MSI MPV Neo240 Supermini D301	Asus P4M400 SE	MSI K7VM-A2P	Asus P4M400 SE Supermini D301
256MB PC2100 SDRAM	1GB MB 800MHz	50MB PC2100 DDR	Kingston PR 256MB 433MHz PC-DDR
No floppy	30MB IDE Hard Drive	No floppy	No floppy
13" WFO Ethernet Card On Board	802.11B Mbps Wireless	802.11GMB PC MC	SMC 10/100/1000 Ethernet
802.11MB/100MB AGP BX		Nvidia GeForce MX400 128MB	
17" Samsung 753UF	11" Flat Screen	Samsung 17" 753UF Flat CRT	Demaco 17" 17" 753 CRT
Mouse 8000 1200DPM	8000 1200DPM	Mouse 8000 1200DPM	Samsung 8000 1200DPM
16 GB 24x48 CDROM	16 GB 24x48 CDROM	16 GB 24x48 CDROM	16 GB 24x48 CDROM
35 Sound Card On Board	35 Sound Card On Board	35 Sound Card On Board	35 Sound Card On Board
128MB SDRAM	128MB SDRAM	128MB SDRAM	128MB SDRAM
256MB SDRAM	256MB SDRAM	256MB SDRAM	256MB SDRAM
17" 1280x1024 CRT	17" 1280x1024 CRT	17" 1280x1024 CRT	17" 1280x1024 CRT
Parasonic 144 MB floppy	144 MB floppy	Parasonic 144 MB floppy	Parasonic 144 MB floppy
64MB 7500 1600	64MB 7500 1600	64MB 7500 1600	64MB 7500 1600
WebCam 300K any PS/2 keyboard	WebCam 300K any PS/2 keyboard	WebCam 300K any PS/2 keyboard	WebCam 300K any PS/2 keyboard
No included	No included	No included	No included
1 yr parts & 3 yrs limited labor	No labor	3 yrs labor & 1 yr parts	1 yr parts only
1000 GB	1000 GB	1000 GB	1000 GB
1000 GB	1000 GB	1000 GB	1000 GB
1000 GB	1000 GB	1000 GB	1000 GB
1000 GB	1000 GB	1000 GB	1000 GB
www.weblog.com	www.weblog.com	www.weblog.com	www.weblog.com
501-234-5678	501-234-5678	501-234-5678	501-234-5678

accompanying game cards are being sold separately ranging from \$45 to \$55.

The N-Gage game deck lets users play multiplayer games played wirelessly in a variety of ways - including using Bluetooth technology as well as playing over mobile networks through "N-Gage Arena." It features high-quality, 3D color graphics with back-light, and eight-way directional controller (aka the "Rockler"), and a

ergonomic design optimized for mobile game play. In addition to its game-playing capabilities, the Nokia N-Gage mobile game deck also features a digital music player (MP3/AAC), stereo FM radio, as well as a e-to-hand mobile phone.

The latter makes the pricing on the somewhat confusing. Most users in Canada are used to buying subsidized mobile phones – and paying something close to \$0 for it (as long as they make

a commitment of one or two years to a given service provider). The N-Gage, however, is being sold as an "unlocked" phone - meaning that you can buy a SIM card and use it with any provider you like (in Canada, Rogers and Microcell would be the choices). And therefore it looks price-wise like an expensive phone.

On the gaming side, it looks like a very expensive Nintendo Gameboy Advance – selling for more than twice

Component	Advan	IGI Computer	MiniConcept	Sony (p.11)
CPU	AMD Athlon 54 3200+	AMD Athlon XP 3000+ / 2.00 GHz	Pentium 4 2.80GHz	amd 54 3200+
Motherboard	Asus SR8M Hyper 3	Asus A7V8XW Sockel A	Asus P4 P800	Asus SR8M Hyper 3
RAM	512 PC-5300 DDR	512 PC-5300 430MHz DDR	DDR 256MB	750MB Dual Channel
I/O Ports	Not listed	Not listed	Not listed	750MB Dual Channel
LAN	Integrated 10/100	On board IEEE 10/100BT	On board network card	On board 10/100/1000 Lan
Video Card	ATI Radeon 9800 128MB	GeForce 6600 128MB 560MHz	On board video card	ATI Radeon 9800 128MB
Monitor	17" MAG Flat Tube S90	18" Acer Flat AL811 LCD	Samsung 18" LCD	17" Samsung 1795 LCD
Hard Drive	64GB BM 7300 (in SATA)	Maxtor 1302B Sockel ATA 6MB	80GB 7200 RPM	Maxtor 1302B Sockel ATA
Optical Drive	52xMedia24 CD-RW	16x Blu DVD-R & Region 2	24x DVD-R	16x DVD-RW
Sound Card	Integrated 6 channel audio	On board 7000 3D Audio	On board sound card	On board 5.1 audio
Speakers	5.1 surround speakers	Devine S85 2.1 2.0B	Logitech 2.540 multichannel home theater system	Logitech 2.540 5.1 System
Printer	Epson Stylus Photo 800 Sockel	N/A	Epson Photo 800 color inkjet	N/A
Scanner	N/A	N/A	Epson 1280i photo scanner	N/A
Case	HP tower case 300W PS	Not listed	ATX tower case w/ 300W power supply	HP tower case 300W PS
Extras			3.2" floppy drive	3.5" floppy / 40GB PS
Mouse	MS optical mouse	Agony optical mouse	Microsoft mouse	MS optical mouse
Keyboard	MS numeric keyboard	MS multimedia PS/2 keyboard	Microsoft keyboard	MS numeric keyboard
Software	Microsoft XP Home	Microsoft Win ME	Microsoft XP - Home Edition	Microsoft XP Home
Warranty	Not listed	Limited warranty	Not listed	3 year limited warranty
Price	\$1371.00	\$1649.51	\$1650.00	\$1649.51
Shipping	Not listed	\$79.00		Free
P&H	\$161.00	\$148.54	\$122.46	\$149.00
GST	\$101.00	\$128.38	\$114.24	\$129.75
URL	www.advan.com	www.igicomputer.com	www.miniconcept.com	www.sony.com
Phone	604-244-2152	804-275-1385	804-730-8182	604-271-6111

the price of an Gameboy Advance SP. And the Nintendo device has a far richer set of games from which to choose.

Having said all of that, Nokia is working with renowned game publishers like Electronic Arts, Activision, Eidos, Sega, Turbo, and THQ to provide what it calls "an attractive and balanced catalogue of high quality games in the marketplace." Nokia N-Gage game deck are

sold separately on game cards (using the MultiMediaCard standard) – and Nokia has said it will also act as a game publisher of branded N-Gage game titles and develop an evolving games portfolio.

If you like the idea of having your phone and game machine in one device – and don't mind paying a little extra for the high quality graphics and mobile online gaming capabilities – you should check this out.

HP Deskjet 5850 Color Inkjet Printer with WiFi support

Want to print wirelessly without attaching your printer to a networked computer? Well, then you may want to look at HP's new \$299 Deskjet 5850 color inkjet printer, which offers built-in wired Ethernet networking and wireless (802.11b) printing for up to five users. In our tests, it also provided great performance and photo-quality, borderless photos.

Component	Address	ICI Computer	VancoConcept	Sauer [p.31]
CPU	Intel P4 3.2GHz C 900MHz/FSB	Intel P4 3.2GHz 800MHz/FSB	Intel Pentium Area2 4GHz 533MHz FSB	Intel Pentium 4 3.0GHz
Motherboard	Asus P4C800E Deluxe E75P	Asus P4C800E P4C800E	Asus SE750P400 Dual Xeon	Asus P4C800E Deluxe
RAM	1GB PC-3200 DDR Memory Kingston	2GB DDR PC-3200 4GB RAM DDR	DDR ECC 512MB PC2100	2GB SDRAM DDR400
I/O Ports	Not listed	Not listed	Not listed	Not listed
LAN	Not listed	On board NIC RJ/10/100	On board TG/100 PCI Network Card	On board RJ/100/1000 LAN
Video Card	ATI Radeon 9700 Pro AGP8X	ATI Radeon 9700 Pro AGP8X	ATI Radeon 9700 Pro AGP8X	ATI Radeon 9700 Pro AGP8X
Monitor	17" WFO TRSV LED	17" Acer Flat AL1710 LED	17" WFO TRSV LED	17" Samsung 161T LED
Hard Drive	20GB Seagate Barracuda 7200rpm	160GB Seagate Barracuda 7200rpm	160GB Seagate Barracuda 7200rpm	160GB Seagate Barracuda 7200rpm
Optical Device	12x DVD-ROM/+R Universal DVD writer	12x dual CD-RW-DVD+/R	12x DVD-RW	12x DVD-RW
Sound Card	Creative SoundBlaster Live! Audigy 2 ZS	On board 8 channel sound card	On board 8 channel sound card	On board 8 channel sound card
Speakers	Creative Inspire 17000	Creative SBS 21 330	ALC100 Inspire 17000	Logitech Z550 5.1 system
Printer	N/A	N/A	N/A	N/A
Scanner	N/A	N/A	N/A	N/A
Case	AcuMax Stearman Case w/3 fans & 400W PS	Not listed	Not listed	Not listed
Cabinet	17" WFO laptop	Not listed	Not listed	Not listed
Mouse	Logitech optical mouse	Logitech optical mouse	Logitech optical mouse	Logitech optical mouse
Keyboard	Logitech cordless MX Duo (no net. keyboard)	Logitech cordless MX Duo (no net. keyboard)	Logitech cordless MX Duo (no net. keyboard)	Logitech cordless MX Duo (no net. keyboard)
Software	Microsoft XP Pro	Microsoft XP Pro	Microsoft XP Pro	Microsoft XP Pro
Warranty	Not listed	Limited Warranty	Not listed	1 year limited warranty
Price	\$2,852.00	\$2,852.00	\$2,852.00	\$2,852.00
Shipping	Not listed	\$73.00	\$73.00	\$73.00
PST	\$225.00	\$225.00	\$225.00	\$225.00
OSR	\$165.00	\$165.00	\$165.00	\$165.00
URL	www.ici.com	www.ici.com	www.ici.com	www.ici.com
Phone	604-244-6783	604-244-6783	604-244-6783	604-244-6783

Calendar of Events

Want to know more about the 2004 Hardware Surveys? Visit our website at www.performancepc.com

JANUARY COMPUTER SNAP MEET

Join Mike Duff, Editor-in-Chief, Saturday, January 24, 2004, 11:00 am - 4:00 pm, Capitol Hill Community Center, 205 South Rowland, North Hollywood, CA 91604. For more information, visit www.performancepc.com

VANTUS GENERAL MEETING

Robert D. Duff, Editor-in-Chief, Wednesday, January 21, 2004, 8:00 pm - 9:00 pm, Henry Conference Center, 500 North Rowland, North Hollywood, CA 91604. For more information, visit www.vantus.com

PMP VANCOUVER CONFERENCE

Join the PMP community in the PMP development community. Thursday 6 Friday, January 22 & 23, 2004, 9:00 am - 5:00 pm, Sheraton Fraser Hotel, 1000 West Broadway, Vancouver, BC V6H 3G9. For more information, visit www.pmpcon.org



Remember to join our Hardware Surveys Next Time

WinMag	CPU (p 21)	BootMag	FrontMag
AMD Athlon XP 220E	Pentium 4 2.4GHz/800MHz	Intel Pentium 4 3.2GHz/800MHz	AMD Athlon XP 220E+ No. 1, 400MHz
MSI K7T Ultra 333 MB W/DDR Sound	ASUS P4C800S Deluxe BK-ACP	ASUS P4C800S Deluxe BK-ACP	ASUS P4C800S Deluxe BK-ACP
256MB PCI 50 GB Hard	6 PCI/IDE 30GB/2GB Channel	32-6MB PCI/IDE 30GB /	Kingston DDR 512MB 4GB M4 PC-253
Used		USB 2.0	
15" LCD External Cool	Not used	Cable Lm	3Com GB NIC PCI 100/10/10 BaseT
ATI Radeon 9800 64MB D5000		ATI Radeon 9800 64MB D5000	
10" Acer 715 LCD	Samsung 121N 71" LCD	Samsung 121N 71" LCD	Sony 17" LCD 1280x1024
Master 203GB 7200RPM ATA/133 HD	203GB 7200RPM HD	Master 203GB 7200RPM HD	Seagate Barracuda 7200.10 20GB 8MB
Sony KSR DVS-R 630X1280 GB-RW	SONY DCR-PC100	LG 4040B 17" Widescreen	LG 4040B 17" Widescreen
Creative SB 0120 47 Sound Card	Creative SB 0120 47 Sound Card	3 Channel Audio	Sound Blaster Audigy 2 ZS
Canon Image 51 5000 w/ink	Canon Image 51 5000	Asus E7S Speaker System w/Subwoofer	Canon Image 51 5000 1280
Epson Stylus C80 Inkjet	Epson Stylus C80 Inkjet		Epson Stylus C80 Inkjet
Epson Perfection 1250			
10" 300W AXP PS Supply	10" 300W AXP PS Supply	10" AXP Power Core w/300W PS	10" 300W AXP PS Supply
144 MB Floppy	100MB 144 Floppy	Periscopic 144MB Floppy	
Logitech Special Mouse 0046	Logitech Special Mouse 0046	Wheel Mouse	Logitech Special Mouse 0046
Logitech Internet Multimedia PS/2 KB	Logitech Control MX Mouse/KB	Wireless Windows Keyboard	Logitech Deluxe AC's wireless keyboard
Not included	Not included	MS Windows XP Professional	MS Windows
1 yr parts & 2 yr limited labor	Not total	3 year labor & 1 year Parts	1 yr part only
17" 284 00"	17" 284 00"	17" 284 00"	17" 284 00"
164	164	164	164
17" 284 00"	17" 284 00"	17" 284 00"	17" 284 00"
17" 284 00"	17" 284 00"	17" 284 00"	17" 284 00"
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Email: events@performancepc.com or fax to 804-838-0400

Calendar of Events

BCIR's CEO Roundtable:

US NC's Roundtable in Canada. Members: \$15-\$25
Non-members: \$45-\$55. Thursday January 28, 2004
Hyatt Regency Hotel 605 B Street, Suite 1000
8:30am-12:00pm. Registration: 8:00am
Dinner: 5:30pm. Visit www.bcir.org or call 854-883-0350

TECHNIVES Business Networking

Members: \$15.00 (members: \$5.00 off by pre-registering online). Thursday January 28, 2004. 5:30pm - 9:30pm. 501 N. 1st St. Suite 100. Free Entry. Business casual. Highlights include interactive display booth, special keynote presentation, featured guest, catered refreshments, and networking. For registration, visit www.technives.com

FEBRUARY COMPUTER SWAP MEET:

Expert advice, show place, and great deals on hardware. \$3.00. Saturday February 7, 2004. 11:00am - 4:00pm. Gasline Center 3034 Commercial Blvd. Call for info 804-525-8204

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Contact Information:

Ryan McQuinn
Technical Research Group/Research
Engineering
Rmcquinn@bentley.com

Engineering Manager

Telegrams: 01000

Description: Aseek is seeking the services of a Service Engineering manager experienced working in the digital wireless technology industry. With 8-10 years of design and management experience supported by a university degree in Engineering the successful applicant will lead all of the following areas:

- A thorough understanding of digital logic, processing and workflow components including digital radio architectures and modulators/formers. Eight years of experience in hardware development including digital baseband design, RFPA design and ASIC development using any VLSI or leading embedded microprocessors and DSP processor development; high speed computer buses and Fibres and analogue hardware design. Working with other departments in the company to set priorities, drive change, design and improve processes. Supporting and training junior development personnel including newcomers, revision and testing. Developing Intellectual Property and growing a portfolio of patents providing complex systems solutions for customers in Embedded, software development.

Contact before and after

Technical Services [Gloss/Vocab](#) [Contact](#)
 Engineering
Reviews@iacweb.com

Infrastructure Architect /
Senior Server Support Specialist
20+ years IT/Cloud

Description: The successful candidate will be responsible for the administration and support of a large

Observation or assessment: Other qualified staff will include digging, planning and record improvement to our client's built test network as well as migrating their existing systems to Windows 2000. Candidates MUST have a strong background with Active Directory and DNS/DHCP server operations and setup.

Successful candidates should have: Minimum of 8 years of total IT experience. Current MScE. Bachelor's degree in a related field.

Contact information

Raymond Sze
Technical Director — TEKsystems
Raymond.Sze@tek.com

Summer Math Development

TYSON, JAMES. 1983.

Description: TTKCommerce is a newly seeking a senior web developer to join the North American development team. You will work on high profile/high traffic web sites that support large eCommerce environments. The candidate will be working in a fast-paced, rapid web development environment that will help expand and bring online all things and be an integral part in developing new websites. This is a large, exciting environment with the latest technologies and high-caliber employees.

Technical editor: Dave

test experience. 44% of all test applications deal with system experience, whereas 17% of all test applications deal with user experience. Microsoft Development experience with the following test technology: Visual Studio, Visual Basic, Visual J++/VBScript, Visual Source Safe, Visual Studio.NET, Windows NT 4.0/2000, MS-MSD ASP.NET, Strong SQL Server, TQ/2000, etc. Another design, administrative and management.

Contact: info@metallurgist.com

Myra O'Neil
Typical Recruits — TEAsgov.org
Missouri@teasgovevents.org

Business Analyst

TELEPHONE 12-4000

Description: As the Business Analyst of the project you will be responsible for analyzing working of the role and identifying differences from the prior release. You will also be responsible for preparing help files and documentation working with stakeholders, help during training in the design of a career plan to implement. To qualify for this position you will need to have experience in the following:

- A strong grasp of computer and network issues
- A strong understanding of user issues and presenting recommendations in clear terms through the system, including a demonstration plan
- A strong

Understanding of high functioning web servers - Experience in preparing web through dynamic implementation (Microsoft (i.e. by using perl) perl, various perl) systems etc.) Familiarity with web security - Excellent writing skills among others. Good UNIX skills - Knowledge of intermediate level web browsers

General knowledge and understanding of Java-based applications technologies (JSP, HTML, XML, Oracle, etc.)

Education (Degree, post graduate and Research)

Contact Information

Patrick Libbey
 Technical Director - TTK Systems
Patrick.Libbey@ttk.com

504 / Jesse Cougle

THE UNIVERSITY OF CHICAGO

Description: We are looking for a backend programmer to do the following tasks:

- Take the dev model (heavily designed) and complete the implementation of the .NET2008 framework. Mostly can VB applications to work with the new framework. Mostly had help write core applications developed in Visual C++ - new development work will be done in Java. Work with and help manage the external business, and work with application support when needed.

To qualify for this position you must possess the following skills:

Minimum 3.5 years experience with SQL Server 2000 with application and data management scripts.

Minimum 3.5 years experience with Visual Basic, able to modify programs for the new data model.

Minimum 3.5 years experience with Visual C++ - Proven ability to read and write code implementations that utilize a basic class structure (C++ based). Java programming and UML, primarily with server development, with some JSP and XML experience.

Parents of Indian students

Interval Recorder = TIKapcam
 From allData.com, 2009

Functional and Technical PeopleSoft 9.0 HR

11/11/2011 11:11 AM

To qualify for this position for site visit must have 10000000 working on PeopleSoft projects. Ideally you will have experience with a variety of the different HRMS modules specifically Payroll Time and Labor HR and Data Services. Solution consultants will be expected to have knowledge of SOA PeopleCode Peopletools tech as well as Oracle Database and Oracle Forms.

Contact information:

Molly Baker
Technical Recruiter — TEOperations
molly@teosolutions.com



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A-Power Computer (p.12)
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(604) 570-0768

BC Computer Inc (p.20)
336-5875 Inland St.
(604) 453-8919

Comp 2000
105 3080 Hastings Drive
(604) 435-2333

Enrich Computers
1803 4500 Knapway
(604) 433-3213

NCIX.com (p.2, 40)
5366 Knapway
(604) 461-6662
www.ncix.com
sales@ncix.com

AtLink Computer
(604) 439-5338

Apex Computers
(604) 415-8933

Big Power Computers
(604) 291-8863

Bestnet Computers
(604) 433-8888

Caltop Computers
(604) 525-1230

COMPULAM

Compulam Computers
281-403 North Rd.
(604) 891-5893

Ever Tech Computers
(604) 837-4721

F X Computers
(604) 837-3713

March Computers Ltd
(604) 845-7541

One Plus Computers Inc
(604) 368-8111

Reinwald Computers
(604) 842-6333

ORCA

Reinwald Computers
(604) 867-3378

LAMPS

3037 Computer
26106 Fossil Hwy
(604) 594-6139

Blue Sales Computer
(604) 681-8836

ENR Technology (P/S)
2534 85th Ave
(604) 686-5265

Onix Computers
(604) 534-8867

Wilson East Computers
(604) 896-3873

Workplace Computers Ltd
(604) 699-0093

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Prime Time Computers
(604) 438-6555
Tadpole Computers
(604) 438-8371

PERFORMANCE

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Rob N Bays Computers
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Jordan Computers Inc
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